RE: Further Question on ARARs Clarification

Snyder, Joan to: Lori Cora 04/21/2010 04:58 PM

Cc: agladstone, Chris.Reive, david.ashton, "Albrich, Elaine", gerald.george, jbenedic, jbetz, jkincaid, john.ashworth, jworonets, kfavard, kims, kpeterson, krista.koehl, ldunn, max, mwschneider,

Sounds good to me.

--Joan

-----Original Message-----
From: Cora.Lori@epamail.epa.gov [
mailto:Cora.Lori@epamail.epa.gov]
Sent: Wednesday, April 21, 2010 4:58 PM
To: Snyder, Joan
Cc: agladstone@davisrothwell.com;
Chris.Reive@jordanschrader.com;
david.ashton@portofportland.com; Albrich, Elaine;
gerald.george@pillsburylaw.com; jbenedic@chbh.com;
jbetz@ci.portland.or.us; jkincaid@chbh.com;
john.ashworth@bullivant.com; Snyder, Joan;
jworonets@anchorqea.com; kfavard@groffmurphy.com;
kims@tonkon.com; kpeterson@cascadialaw.com;
krista.koehl@portofportland.com;
ldunn@riddellwilliams.com; max@tonkon.com;
mwschneider@perkinscoie.com;
nklinger@ci.portland.or.us; NvanAelstyn@bdlaw.com;
Paul.Hamada@ConocoPhillips.com;
pdost@pearllegalgroup.com; Phampton@perkinscoie.com;
sparkinson@groffmurphy.com;
sriddle@pearllegalgroup.com; tgold@sjzlaw.com;
willette.a.dubose@conocophillips.com;
wjoyce@sjzlaw.com; BURKHOLDER Kurt; ANDERSON Jim M;
Humphrey.Chip@epamail.epa.gov;
Blischke.Eric@epamail.epa.gov
Subject: RE: Further Question on ARARs Clarification

Hello, Joan. EPA sees no reason in continuing the
dialogue on these
state ARARs at this time. Let's let the FS process
progress.

Lori Houck Cora
Assistant Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency
Region 10, ORC-158
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-1115
cora.lori@epa.gov

RE: Further Question on ARARs Clarification

Snyder, Joan
to:
Lori Cora

04/19/2010 11:37 AM

Cc:
jworonets, agladstone, "Albrich, Elaine", Chris.Reive,
david.ashton, gerald.george, jbenedic, jbetz, jkincaid,
john.ashworth, kfavard, kims, kpeterson, krista.koehl, ldunn,
max, mwschneider, nklinger, NvanAelstyn, Paul.Hamada, pdost,
Phampton, "Snyder, Joan", sparkinson, sriddle, tgold,
willette.a.dubose, wjoyce

Hi Lori,

Thanks for your response on our ARARs questions.

I'm glad we raised the issue of the Bioaccumulation guidance, because it appears there is a misunderstanding about the status of the Food Web Model and the development of site specific PRGs based on the bioaccumulation pathway.

The LWG submitted the revised food web model in the July 21, 2009 Draft Portland Harbor RI/FS Bioaccumulation Modeling Report. We know it has been reviewed by Larry Burkhard at EPA's ORD lab in Duluth. Although we did not receive any formal comments on it, we were told by Eric that it appears the bioaccumulation modeling work was sound and was acceptable for developing PRGs. With respect to the PRGs, EPA asserted that PRG development is a risk management function and

instructed the LWG not to include PRGs in the draft baseline risk assessments. Therefore, PRGs developed from the bioaccumulation modeling (food web modeling, BSARs and BSAFs) were submitted separately on March 29, 2009. Updated PRGs were submitted on February 10, 2010.

So, maybe we are just caught in a "catch up" phase. We agree that the DEQ Sediment Bioaccumulation Guidance offers non-site-specific screening values that could be used if we had not gone through the process of building a bioaccumulation model, evaluating relationships between sediment and tissue COC concentrations, and developing site specific PRGs from that analysis. However, since we have done the site specific analysis, EPA guidance would require us to rely on our site specific analysis rather than applying generic values from the Bioaccumulation Guidance. We understand that the screening values in the Bioaccumulation Guidance may be carried as a TBC until EPA either formally approves the Bioaccumulation Modeling Report or, if EPA was not planning to take that to a formal approval, until it sees how the results of that analysis are applied in the Feasibility Study.

After you've talked to your folks, let me know if we've missed anything from the legal side.

With respect to our second question about the context for applying the Oregon acceptable risk level and hot spot rules, we have a few reactions, although we think it would be best to dig into them, if necessary, when these issues arise in the context of the FS. First, with respect to a probabilistic risk assessment, EPA directed us that, if we wanted to use a probabilistic risk assessment, it could only be after performing the deterministic assessment consistent with EPA directives. The LWG is still evaluating how probabilistic assessments may be used as a tool for making risk management decisions. Second, with respect to acceptable risks for non T&E ecological receptors,

Oregon looks at that risk on a population basis, specifically:
"'Acceptable risk level for populations of ecological receptors' means a
10 percent chance, or less, that more than 20 percent of the total local
population will be exposed to an exposure point value greater than the
ecological benchmark value for each contaminant of concern and no other
observed significant adverse effects on the health or viability of the
local population." OAR 340-122-0115(6). This definition is less
conservative than the population-level measurement endpoints that EPA's
BERA problem formulation directed the LWG to use. Third, with respect
to application of the 10-6 risk level to individual PCB congeners, that
is what we have done and, from what I understand, this approach has been
discussed by EPA and the LWG technical folks. Finally, on the issue of
different human exposure assumptions, that again is something that we
may want to look at in the context of the FS. Although you assume any
differences will not be very significant, we do want to see how that
plays out.

Let me know if there are any issues on which you think there needs to be
further discussion at this time, or whether we can just wait to see if
they arise and then address them in that context. Thanks!

--Joan

Joan P. Snyder
Chair -- Resources Development and Environment Group
STOEL RIVES LLP | 900 SW Fifth Ave, Suite 2600 | Portland, OR 97204-1268
Direct: (503) 294-9657 | Mobile: (503) 349-4737 | Fax: (503) 220-2480
jpsnyder@stoel.com | www.stoel.com

-----Original Message-----
From: Cora.Lori@epamail.epa.gov [mailto:Cora.Lori@epamail.epa.gov]
Sent: Wednesday, March 31, 2010 1:36 PM
To: Snyder, Joan
Cc: agladstone@davisrothwell.com; Chris.Reive@jordanschrader.com; david.ashton@portofportland.com; Albrich, Elaine; gerald.george@pillsburylaw.com; jbenedic@chbh.com; jbetz@ci.portland.or.us;

jim.mckenna@portofportland.com;
jkincaid@chbh.com; john.ashworth@bullivant.com;
Snyder, Joan;
jworonets@anchorqea.com; kfavard@groffmurphy.com;
kims@tonkon.com;
kpeterson@cascadialaw.com;
krista.koehl@portofportland.com; Burkholder
Kurt; ldunn@riddellwilliams.com;
Lparetchan@perkinscoie.com;
max@tonkon.com; mwschneider@perkinscoie.com;
nklinger@ci.portland.or.us;
NvanAelstyn@bdlaw.com;
Paul.Hamada@ConocoPhillips.com;
pdost@pearllegalgroup.com; rjw@nwnatural.com;
sparkinson@groffmurphy.com;
sriddle@pearllegalgroup.com;
tgold@sjzlaw.com;
willette.a.dubose@conocophillips.com;
wjoyce@sjzlaw.com; BURKHOLDER Kurt; ANDERSON Jim M;
Humphrey.Chip@epamail.epa.gov;
Blischke.Eric@epamail.epa.gov;
Koch.Kristine@epamail.epa.gov
Subject: Re: Further Question on ARARs Clarification

Hello, Joan. I have consulted with the Kurt and Jim on your questions
about the state ARAR/TBCs. Here are our responses.

1st Question- Should DEQ's Sediment Bioaccumulation Guidance be a TBC?
Yes, the LWG submitted a draft BRA, but their risk assessment didn't
include preliminary remediation goals (PRGs) based on the food web model
(FWM). The LWG stated numerous times in their draft BRA that their FWM
would be submitted at a later date. We're waiting for that FWM. Two of
the most important things the LWG's FWM will do is to consider
bioaccumulation & back-calculate sediment PRGs from acceptable fish
tissue concentrations. DEQ's Sediment Bioaccumulation Guidance contains
risk-based concentrations (i.e., PRGs) that were developed using a
general FWM (actually biota-sediment accumulation factors, BSAFs). The
risk-based concentrations in our guidance are generic values that can be
used for screening or to make cleanup decisions. Until EPA accepts the
LWG's FWM & associated PRGs, DEQ's Sediment Bioaccumulation Guidance
needs to stay on the list while the FS is developed to see whether the
LWG's FWM is acceptable or covers all PH chemicals or if its determined
that the guidance brings something more to the table for cleanup.

2nd Question- Is DEQ's risk assessment process essentially equivalent to EPA's process? I understand your comment as saying that since the PH risk assessment was performed under EPA process & not DEQ's process…, Oregon acceptable risk level & hot spots rules are out of context & shouldn't be considered ARARs. In your e-mail, you say the LWG provided specific examples of why Oregon acceptable risk levels & hot spot rules could not be applied to the output of the EPA-directed risk assessment. I assume those "specific examples" are in the LWG's 2/1/10 e-mail (with the attached "Table 1- ARAR Questions for February 4, 2010 Meeting with EPA"). The LWG's 1st specific example is that Oregon law allow the use of probabilistic risk assessment. EPA discussed using probabilistic risk assessment process with the LWG. EPA did not prohibit the LWG using probabilistic methodology. The LWG's 2nd specific example is that Oregon defines acceptable risk levels for populations of ecological receptors differently than EPA. Oregon's actual definition of acceptable risk may be more specific than EPA's, but they are essentially the same. That is, population-level protection for non-threatened-or-endangered (T&E) species, & protection of individual T&E-species receptors. The LWG's 3rd specific example is Oregon's 10-6 risk level applies only to individual carcinogens, in the case of PCBs meaning individual congeners. Joan is correct. DEQ's process for considering carcinogenic risk from PCBs is that if you have congener data, you apply the acceptable risk level for individual carcinogens to individual PCB congeners. However, if you have only total PCB data (Aroclors), then you apply the acceptable risk level for individual carcinogens to the total concentration, with the assumption that the risk could be driven by a single congener. DEQ has consistently applied these approaches for the last ten years. The LWG's 4th & final example is that human exposure assumptions would be different under Oregon law

as compared to those directed by EPA. The difference shouldn't be very
significant for the PH project. The bottom line is that Oregon's risk
levels and hot spot criteria are promulgated environmental standards and
criteria related to selecting a protective cleanup of releases of
hazardous substances and under the NCP are applicable or relevant and
appropriate to the Portland Harbor cleanup.

Let us know if you need any further clarification.

Lori Houck Cora
Assistant Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency
Region 10, ORC-158
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-1115
cora.lori@epa.gov

Further Question on ARARs Clarification

Snyder, Joan

to:

Lori Cora, Burkholder Kurt

03/09/2010 04:40 PM

Cc:

jworonets, rjw, jim.mckenna, agladstone, "Albrich, Elaine",

Chris.Reive, david.ashton, gerald.george, jbenedic, jbetz,

jkincaid, john.ashworth, kfavard, kims, kpeterson, krista.koehl,

ldunn, Lparetchan, max, mwschneider, nklinger, NvanAelstyn,

Paul.Hamada, pdost, "Snyder, Joan", sparkinson, sriddle, tgold,

willette.a.dubose, wjoyce

Lori and Kurt,

I've been tasked with following up with you on two items relating to
State ARARs in Lori's February 10 letter.

The first of these is a question with respect to the designation of
DEQ's 2007 Guidance for Assessing Bioaccumulative Chemicals of Concern
in Sediment as a TBC. In the LWG request for clarification on February
1, we asked for clarification as to what specifically EPA believed
should be considered that was not already considered. In response, you
explained that:

> "EPA discussed with DEQ the LWG's requested clarification. By its
> terms, the DEQ guidance may inform cleanup levels in addition to
> risk assessment. For example, we envision DEQ's guidance could be
> used for any possible chemicals not considered in the Portland
> Harbor food web model."

We are not sure we understand what this means and, because this guidance
document applies to screening and risk assessment, and we have already
submitted to EPA our draft risk assessments, we think it is important to
make sure we understand exactly what you mean.

DEQ's 2007 Guidance for Assessing Bioaccumulative Chemicals of Concern
in Sediment:

> "describes a process used by the Oregon

Department of
Environmental Quality (DEQ) to evaluate chemicals found in
sediment for their potential contribution to risk as a result of
bioaccumulation. It is presented here as an example of a method
that others may use for that purpose, if appropriate. Its use,
however, is not required." (Guidance, page 1)

Our risk assessors feel that they have used an equivalent process and
that these steps have therefore already been fully considered.
Specifically, although the guidance focuses mostly on screening steps
based on sediment screening level values (SLVs), it also explains what
to do after the comparison to SLVs:

"If the BCOI concentration is still greater than its site-specific
SLV, do one of the following:

"a. Evaluate the feasibility of cleaning up areas exceeding SLV
levels to the site-specific SLV or to ND, whichever is higher, or,
for a naturally occurring chemical, to its background
concentration ***

"or

"b. Collect data on the concentration of BCOIs in fish or benthic
invertebrate tissue using one of the following methods, and then
continue with Step 5.
"i. Collect existing tissue data from an area that is
applicable to your site (e.g., has appropriate fish home range and
analytes) or data from fish caught or benthic invertebrates
collected at your site for this purpose; or
"ii. Perform laboratory or in situ bioaccumulation
tests on sediment from the site.

"5. Compare the estimated or measured
concentration of each BCOI in fish or benthic invertebrate tissue
to appropriate acceptable tissue levels (ATLw and ATLh) or
critical tissue levels (CTL). If the concentration is lower, no
further action is required with respect to

bioaccumulation for
that COI and you should continue with a regular toxicity
evaluation. If the BCOI concentration is greater than the ATL or
CTL, the COI must be considered a chemical of potential concern
(COPC) with respect to bioaccumulation and must be cleaned up to a
bioaccumulation-based level or to ND, whichever is higher; or, for
a naturally occurring compound, to its background concentration."

The guidance document applies to screening and risk assessment steps,
which have already been completed and submitted in draft to EPA. The
LWG doesn't see any issue here, because its Human Health and Ecological
risk assessors believe they have performed the equivalent of the steps
quoted above in the HHRA and the BERA and in the development of the
sediment PRGs and that this approach has therefore already been fully
considered. Does EPA have a different view?

Our second issue regarding State ARARs is really a comment relating to
the Oregon Environmental Cleanup Law, under which EPA identified both
the acceptable risk levels and hot spot rules as ARARs. With respect to
both of these, the LWG agreed they were ARARs but expressed its
understanding that any particular criteria or requirement associated
with these rules would be applied in the context of the Oregon Cleanup
Law and implementing rules as a whole. By that we meant that you need
to compare apples to apples--when applying these Oregon requirements as
ARARs, you need to apply them to the output of a risk assessment as it
would be done under Oregon law. In the LWG request for clarification,
we provided specific examples of why those criteria could not be applied
directly to the output of the EPA-directed risk assessment because the
EPA risk assessment was done differently, and likely more
conservatively, than it would have been done under Oregon
law—essentially apples and oranges.

The response you provided was that "DEQ considers the

risk assessment performed by the LWG to be generally consistent with what DEQ would require under its program, and adequate for determining whether acceptable risk levels are exceeded at the site." We don't disagree that the EPA risk assessment is adequate under Oregon law. However, we do believe it is likely more conservative, which causes the apples and oranges problem if you try to apply the acceptable risk criteria or the hot spot rules directly to the output of the EPA-directed risk assessment.

We do not think this is an insurmountable problem. Our technical teams are having discussions on risk and hot spots and trying to work with the output of the EPA directed risk assessment. We think it is most productive for these conversations to continue on the technical level. However, when we get to the point in the future of trying to determine what it means to apply Oregon acceptable risk rules or Oregon hot spot rules as ARARs, we believe that discussion will need to come back to an apples-to-apples comparison. We are hoping that the technical discussions will help us understand how to best make those comparisons.

Thanks for your input on these issues.

Joan P. Snyder
Chair -- Resources Development and Environment Group
STOEL RIVES LLP | 900 SW Fifth Ave, Suite 2600 | Portland, OR 97204-1268
Direct: (503) 294-9657 | Mobile: (503) 349-4737 | Fax: (503) 220-2480
jpsnyder@stoel.com | www.stoel.com